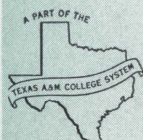


Integration And Cooperative Gin Operations On the High Plains

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Summary

Services provided to farmers are an important aspect of "integration" in the agricultural industry. This study was made to determine what services are provided and what changes have occurred in their makeup in recent years, and to evaluate the experiences in providing services to member-patrons by cooperative gins on the High Plains of Texas.

Most of the cooperative gins on the High Plains have been in operation for several years. Many were organized in the 1930's. The gins have substantial investment in fixed assets. The relatively high overhead cost necessitates near capacity operation for "low-cost" efficiency. Operating capital requirements also are sizable and their efficient management contributes to the financial success of the gin.

Member's equities were greater than the value of fixed assets for 80 percent of the gins. This shows that the cooperative gins in the area are relatively sound financially. Net margins per patron exceeded \$400 for 42 percent of the gins and were less than \$100 for only 4 percent.

Apparently, neither the age nor the size of the gin significantly affects the number of services provided. A somewhat higher percentage of the larger gins had a labor supply service and served the farmer in marketing his cotton through the Plains Cotton Cooperative Association.

There has been a noticeable increase in services provided by cooperative gins over the past 3 decades. Farmers come to rely on a service once it is initiated. The cooperative likely finds it difficult to withdraw a service once it has been offered.

Sixty gins gave complete information about the availability of marketing services for their patrons. Four of these did not provide marketing service as a function of the cooperative, but it was available to their patrons at the gin. The other 56 gins provided various services in marketing. Fifty-two had a government loan processing service, 41 had brokerage service, 29 purchased cotton outright (although only 12 purchased other than remnants) and 42 provided contract and processing service on cotton committed to the Plains Cotton Cooperative Association. More than half of the cotton handled through the gin's marketing services went to the PCCA, either processed into government loan or to be sold through their marketing pool.

All the gins purchased and sold their patrons' cottonseed, and 60 of the 62 gins handled planting

seed for their patrons. Only seven gins provided seed delinting and treating service.

All the gins provided hauling service to the compress, some by contract with local truckers and others with cooperatively owned trucks. Slightly more than half the gins provided bur distribution service to patrons, and most of the others provided easy access to the burs for those farmers who wanted them.

Twenty-seven of the 62 gins had a labor supply service for patrons, although eight of these only acted as an intermediary between domestic workers and farmer-patrons. Twelve of the 19 gins with a rather extensive labor supply service provided central housing facilities. Probably the most serious problem in providing services to patrons is that encountered in the labor supply service.

More than half the gins provided entomology service to patrons. Thirty provided periodic field checking for insect population, 25 handled insecticides and 19 arranged for airplane dusting service for their patrons.

Fifty-nine of the 62 gins furnished short-term credit, primarily for snapping cotton, for planting seed and other supply purchases. Eight of the gins handled fuel and lubricants, nine handled fertilizers and 30 handled other supplies such as feed, anti-freeze, seed and fertilizer supplies.

Eight of the gins provided various other services such as furnishing stalk cutters, poison machines, cotton picking machines, welding shopwork, storage and drying grain; one gin furnished trailers on loan to farmers to haul the cotton from the field to the gin.

Cooperative managers were asked about advantages of providing the various services. Most consistently mentioned were: convenience to patron, creates customer good will and increases business. The implication was that the gin profited indirectly from these services. Many were provided at approximate cost or at no charge, but they contributed to increased ginnings upon which, in turn, the economic welfare of the gin depended. A statistical measure of the relationship between net margins and bales ginned supported this viewpoint.

The results of the study suggest that careful consideration should be given to the service aspect of their operations by those who contemplate initiating a cooperative gin on the High Plains. Past experience indicates more services rather than less is likely to be the trend in the future.

Integration and Cooperative Gin Operations on the High Plains

Clarence A. Moore, Howard S. Whitney and R. L. Hunt*

MANY PEOPLE BELIEVE that integration is an important aspect of our agricultural industry. Some think it is advancing rapidly into phases of agriculture formerly free of integration. Others say it is far less important than generally thought, and that it is not likely to spread much in the future. The difference of opinion depends to some extent on the different meanings associated with the term.

Concepts of Integration

To some, vertical integration means *complete central ownership and control* of subsequent operations in production, marketing, processing and handling of farm products. An extreme example is that of an organization that owns and operates (1) farms that supply the raw products, (2) units that assemble, grade and process them, (3) wholesale and warehouse operations that handle their movement, care and distribution and (4) retail stores that sell them to the final consumer.

A second interpretation includes contract farming in vertical integration, a *legal agreement which ties together management decisions* and risk of two or more subsequent operations even though they may be separately owned and (in part) separately managed.

A third concept covers *informal* types of vertical integration. This may simply mean close communication between the parties concerned when it affects management decisions of one or more of the units.

The definition of management as a decision-making process gives a basis for a better understanding of the different concepts and of the meaning of integration as used in this study. Recent writings in the field of farm management have outlined five steps in the management function:

1. Observation and accumulation of data and information relevant to the decision to be made.
2. Analysis of the data and information in view of the purpose which the decision is to serve.

3. Making the decision, such as, selecting the course of action that appears best suited to the purpose, as a result of step 2.
4. Taking action based on the decision made in step 3.
5. Accepting the economic consequence that results from the decision.

There is no question of responsibility for these five steps in the first concept of integration discussed earlier. When complete central ownership and control is involved, the five steps are *completely absorbed* as a part of the central management.

There is considerable variation in responsibility for the five steps in the management function when the concept of integration includes that of contract farming depending on the makeup of the particular contract. The contract may or may not involve parts of all five steps, and the responsibility for them may be only *partially absorbed* in central control of operations. It should be emphasized that this is merely a broadening of scope of the concept of integration. It

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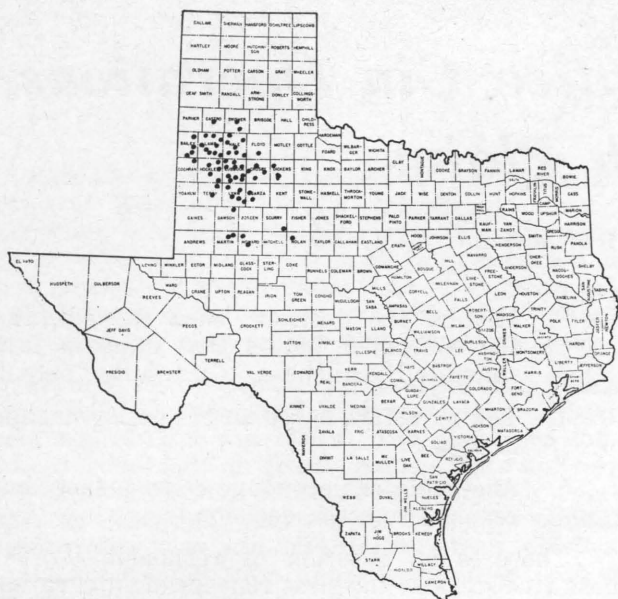


Figure 1. Location of gins furnishing data for the Plains cotton gin study.

includes contract farming as well as complete ownership and control.

The third, and more loosely knit concept of integration, includes services and communication if the management function is affected. When the producer relies on insecticide supply firms for entomology service, the local gin to supply him with labor or with plane spraying service, or an agronomist to tell him which variety is best for his soil and climate conditions, steps one and two of the management function are directly integrated and the overall management function is affected.

There is increasing complexity of decisions in modern farm production. The lengthening chain of marketing and handling agencies between the farm producer and the consumer has resulted in greater difficulty of transmitting consumers' preferences in foods and clothing back to the farmer. These conditions have induced integration, regardless of the particular form it takes.

The present study was undertaken to determine the extent and form of services provided to member-patrons by cooperative gins on the High Plains of Texas, whether there has been an increase in providing services, and to evaluate their experiences in providing them. It is the more loosely-knit definition of integration described in the preceding section that is used for our purpose in making the study.

Data were obtained from personnel, mainly managers, of 62 cooperative gins in the High Plains area, Figure 1. Information included services offered to member-patrons, when the service was started, the number of patrons using the service and the advantages, disadvantages and problems associated with the services.

Analyses were made to determine if there was a relationship between the financial success of the cooperatives and the number and kinds of services performed.

Age, Size and Financial Strength of Cooperative Gins

The services provided by a cooperative gin are affected by its age, its size, its financial strength and its volume of business. Some insight thus may be gained by an appraisal of age, size, patronage, business volume and financial position. Such an appraisal will necessarily be superficial since detailed answers lie outside the scope of this study.

Even brief answers, however, will reveal important factors. For example has the cooperative been in operation long enough to expand services to meet patron demands? Does it do a big enough business volume and have enough patrons to insure particular services through adequate demand? Is it large enough and financially strong enough to furnish a variety of services and risk new endeavors?

Age

Most of the cooperative gins in the High Plains have been in operation for several years, Table 1. Almost two of every three were organized more than 20 years ago. Most of these were organized in 1930-39, mainly in the latter part of that period. About one out of every five of the gins studied was organized after 1950.

Most of the cooperative gins in the High Plains have operated long enough to become well adjusted in providing those services most demanded by their patrons. When there is a lack of such adjustment, something other than age of the cooperative is probably the cause.

Size and Volume

The size of an enterprise may be measured in several ways, and the different measures are useful for different purposes. Total assets are useful as a measure of business size, if both fixed and operating capital are limiting factors in the amount of business the firm can handle and if it is known what amounts of each are required for different volumes of business. Fixed assets

TABLE 1. NUMBER AND PERCENT OF COOPERATIVE GINS BY SPECIFIED PERIODS WHEN ORGANIZED

Period when organized	Gins reporting	
	Number	Percent
Before 1930	4	6.6
1930 - 34	9	14.7
1935 - 39	26	42.6
1940 - 44	5	8.2
1945 - 49	3	4.9
1950 - 54	10	16.4
1955 and later	4	6.6
Total	61	100.0

are useful as a measure of size if the plant and equipment is a limiting factor in volume of operations, but operating capital does not have a limiting influence. Both of these measures are used when the objective is to measure the potential volume of business rather than the actual volume. Neither of them indicates what proportion of the potential capacity is being utilized.

Total assets averaged \$387,507 per gin for the 59 gins that provided such information, Table 2. However, there was considerable variation between gins. Twenty-four percent had total assets less than \$200,000 while the total assets of 15 percent exceeded \$600,000. Sixty-one percent of the gins had total assets from \$200,000 to \$600,000.

Fixed assets averaged \$204,413 per gin, more than half of the total assets. However, 12 percent of the gins had fixed assets exceeding 80 percent of the total assets and 17 percent had fixed assets less than 40 percent of the total assets, Table 3. Almost half of the gins had fixed assets varying from 40 to 60 percent of the total assets.

From this it appears that both the initial investment in structures and equipment and operating capital are important aspects of gin operations.

The overhead (fixed assets) expenses are incurred regardless of volume handled. Therefore, a relatively large overhead is a heavy financial burden to a business if forced to operate at considerably less than capacity over an extended period.

The number of bales ginned appears to be the most useful measure of business volume. Most of the gin's operations are geared to ginning. Other services are either carried on in order to gain greater ginning patronage or are themselves dependent on the volume of ginnings.

Bales ginned per gin averaged 8,182 in 1956, 7,132 in 1957 and 8,702 in 1958, but individual gins varied widely. Ten percent ginned less than 4,000 bales, and 18 percent ginned over 12,000 in 1958, Table 4. Ginnings ranged from 4,000 to 10,000 bales for 57 percent of the cooperatives.

Most of the gins either maintained or increased the number of patrons in recent years. Sixty-three percent reported no significant change during 1956-58, while 26 percent had an increase in patrons and 10 percent a decrease. The num-

TABLE 2. NUMBER AND PERCENT OF COOPERATIVE GINS BY SPECIFIED TOTAL ASSET CATEGORIES

Total assets	Gins reporting	
	Number	Percent
Less than \$200,000	14	23.7
\$200,000 - \$399,999	21	35.6
\$400,000 - \$599,999	15	25.4
\$600,000 and above	9	15.3
\$387,507 (average)	59	100.0

TABLE 3. NUMBER AND PERCENT OF COOPERATIVE GINS HAVING SPECIFIED CATEGORIES OF FIXED ASSETS AS A PROPORTION OF TOTAL ASSETS

Fixed assets as a percent of total assets	Gins reporting	
	Number	Percent
Less than 20 percent	0	0.0
20 - 39 percent	10	17.5
40 - 59 percent	27	47.4
60 - 79 percent	13	22.8
80 percent and over	7	12.3
Total	57	100.0

ber ranged from 100 to 250 patrons for almost 60 percent of the gins in 1958, Table 5. Twenty-one percent had less than 100 patrons and 10 percent had more than 300.

The gins gave evidence of efficient and profitable operations based on the 1958 season. The measure used is net margins before patronage refund. The net margins varied from \$25,000 to \$100,000 for about 60 percent of the gins. Twenty-five percent had less than \$25,000 and 9 percent exceeded \$125,000.

The individual member-patrons of cooperative gins have a stake in these earnings, Table 6. Net margins exceeded \$400 per patron for 42 percent of the gins, and were less than \$100 per patron for only four percent.

Members Equities

A rule-of-thumb measure of financial security in a cooperative enterprise is that the members' equities be equal to, or exceed, the value of the fixed assets. By this measure most of the cooperative gins in the High Plains are financially "strong." Only 20 percent of the gins studied have members' equities less than their fixed assets, Figure 2. Members' equities were from one to two times the value of fixed assets for 46 percent of the gins, and exceeded twice the value of fixed assets for 34 percent of the gins. One gin's member equities were more than four times the fixed assets; another was more than three times the fixed assets. In these two cases, fixed assets were a relatively low proportion of the total assets.

Services Provided

Information was obtained from the gins on 14 categories of services in addition to ginning. The 14 services were marketing lint cotton, purchase of cottonseed, handling planting seed, hauling cotton to gin, hauling cotton to compress, distributing burs, supplying labor, providing entomology service, furnishing credit, handling fuel and lubricants, handling fertilizer, supplying feed-stuffs, handling other farm supplies and other services.

The number of specific service categories, excluding "other services," provided by individual gins ranged from 4 to 11. Seven of the 62 gins studied provided 4 to 5 services, 27 provided 6 to 7, 20 provided 8 to 9 and 8 provided 10 to 11.

TABLE 4. NUMBER AND PERCENT OF COOPERATIVE GINS BY NUMBER OF BALES GINNED, 1958

Bales ginned	Gins reporting	
	Number	Percent
Less than 4,000	6	10.0
4,000 - 5,999	11	18.3
6,000 - 7,999	14	23.4
8,000 - 9,999	9	15.0
10,000 - 11,999	9	15.0
12,000 and above	11	18.3
Total	60	100.0

In addition, quite a few did provide, or help members obtain, other services and materials. Usually this was infrequent, on an informal basis and mainly only when a specific request was made by a patron.

Analysis showed no significant relation between the number of services provided and the age of the cooperative. The number of services provided by individual gins varied rather widely within each of the cooperative age categories. There was a slight increase in the average of the number (rounded to the nearest decimal) of services provided from the "youngest" to the "oldest" age categories. For example, the average of the number of services provided by those cooperatives less than 10 years old was 6.6, by those 10-19 years old 7.0, by those 20-29 years old 7.9 and by those 30-39 years old 8.2. However, the relationship was statistically insignificant. The implication is that the age of the cooperative has little or no influence on number of services provided, and that factors other than age account for variation in the number of services provided by different gins.

Increase in Services During the Past Two Decades

Respondents were asked whether the services were provided at the time the cooperative was first organized and for the date when each service was first provided. The intent was to determine whether there had been an increase or decrease in the number, or a change in the kind, of services provided over the years as well as the extent of such changes. The response was sufficiently complete to show that there has been an increase in the number of services provided. It was not sufficient, however, to determine satisfactorily

TABLE 5. NUMBER AND PERCENT OF COOPERATIVE GINS BY NUMBER OF PATRONS, 1958 SEASON

Patrons	Gins reporting	
	Number	Percent
Less than 50	1	1.7
50 - 99	11	19.0
100 - 149	17	29.3
150 - 199	7	12.1
200 - 249	10	17.3
250 - 299	6	10.3
300 and above	6	10.3
Total	58	100.0

the extent of change in the aggregate of the services provided. Some respondents could not recall when particular services were first provided. Those cases where such information was sufficiently complete to determine when individual services were first provided will be covered in later sections of the report which describe the experiences of the cooperatives with those particular services.

A large proportion of the respondents recalled that particular services provided at present were not provided when their cooperative was first organized. In addition some services were established among the cooperatives within particular periods of time. Some of these were established fairly recently. For example, making burs readily available to patrons and supplying labor were reported as first established by most gins after 1950.

The information provides evidence that there has been an increase in the number of services provided over the last two decades. There was little change in kinds of services provided by gins, other than as a result of adding services not formerly provided. This indicates that once a service is initiated and farmers come to rely on it, it is difficult to withdraw that service.

Marketing Services

Sixty respondents provided information useful in studying marketing services provided patrons, Table 7. The market services, though available to patrons, were separate from the cooperative for four gins.

The 56 gins providing marketing services as a function of the cooperative ginned a total of 481,773 bales during the 1958 market season. Forty-two gins reported that 28,035 bales ginned elsewhere were marketed through their services and 46 gins reported ginning a total of 48,688 bales that were not marketed through their services. Thus, the total bales marketed through the 56 gins that provided marketing services were 461,120.

Marketing service is listed as one among 14 service categories studied. However, there are several types of marketing services. For example, 52 of the 56 gins helped process their patrons' cotton into government loan, 41 had a brokerage service, 29 purchased cotton outright (although only 12 of these purchased other than remnants) and 48 handled the contracts and the cotton committed by contract by their patrons to the regional PCCA. Managers of gins that provided brokerage service usually acted as buyers for cotton firms that provided them with a checkbook and kept them informed on prices to pay for different grades.

Of the 461,120 bales handled through the gin's marketing service, 46.2 percent was processed into government loan, 12.3 percent was sold through broker service, 5.5 percent was purchased outright by the gins and 36 percent was

marketed through the PCCA pool. Also, more than one-third of the bales processed into government loan were processed through the PCAA. Thus, more than half of the cotton marketed through the service provided by the gins went to PCCA, either processed into government loan or to be sold through their marketing pool.

There was considerable variation among the gins in the proportion of total ginnings processed into government loan in 1958. Fourteen percent of the gins that processed cotton into government loan processed less than 20 percent of the bales ginned, 21 percent processed 60 to 80 percent and 9 percent processed more than 80 percent of the bales ginned into the loan.

Of the 41 gins providing brokerage service, 10 purchased less than 500 bales, 7 purchased 500 to 1,000 bales, 14 purchased 1,000 to 2,000 bales, 8 purchased 2,000 to 4,000 bales and 2 purchased more than 4,000 bales.

Sixteen of the 29 gins that bought cotton outright from their patrons bought less than 100 bales, 8 bought 100 to 1,000 bales and only 5 bought more than 1,000 bales.

There was considerable variation, also in bales marketed through the PCCA pool among the gins. Nine of the 48 gins providing this service marketed less than 500 bales, 10 marketed from 500 to 2,000, 14 from 2,000 to 4,000, 10 from 4,000 to 8,000 and 5 marketed in excess of 8,000 bales through the PCCA pool.

Forty-eight of the 56 gins with marketing services as a function of the cooperative, provided such services when they first organized, 4 started marketing services later and 4 could not recall when marketing services first were provided.

Only nominal fees are charged for the services. The fee for brokerage service, usually 50 cents per bale, is paid by the buyer. About two out of every three gins that provided brokerage service credited the fee to the gin account, two gave it to the producer (seller), several credited it to the manager (who performed the service) and a few divided the fee between the manager and the general gin account.

The fee charged for processing cotton into government loan was 25 cents for the first bale, 15 cents for each additional bale from 2 to 6 bales, 10 cents for each additional bale from 7 to 18 bales and 5 cents for each bale over 18.

The direct income from marketing services did little more than cover costs of providing the services. Most gins that bought cotton outright from the producer about broke even on such purchases. Respondents were asked to estimate the proportion that income from marketing services contributed to total net margins on gin operations (before patronage refunds). Most of them said they had a slight loss, about broke even, or made less than 5 percent of the gin's net margins from their marketing services. Nine said they made more than 5 percent.

TABLE 6. PROPORTION OF GINS SHOWING NET MARGINS PER PATRON BY SPECIFIED CATEGORIES

Net margin per patron	Gins reporting	
	Number	Percent
Less than \$100	2	4
\$100 to \$199	14	25
\$200 to \$399	16	29
\$400 to \$599	17	31
\$600 and above	6	11
Total	55	100

There is an indirect income from marketing services, as well as from other services, provided by the gins. When the provision of such services adds to ginning patronage volume, and the "net margins" of gin operations are enhanced as a result of that patronage, the contribution is indirectly from the service. Most services provided by gins are justified on the basis that they indirectly contribute to the success of the gin. Some are provided at no charge as a convenience to the gin's customers in order to enhance patron good will.

Most respondents in the study emphasized they could hardly operate without providing marketing services to their patrons. It is an established practice among gins in the area; patrons expect the marketing services, and should these services not be available at the gin, it would probably be difficult to attract customers.

Respondents mentioned the following among the most important advantages of providing marketing services: (1) saves the patron time and expense in disposing of his cotton, (2) provides him with more bargaining power since it gives

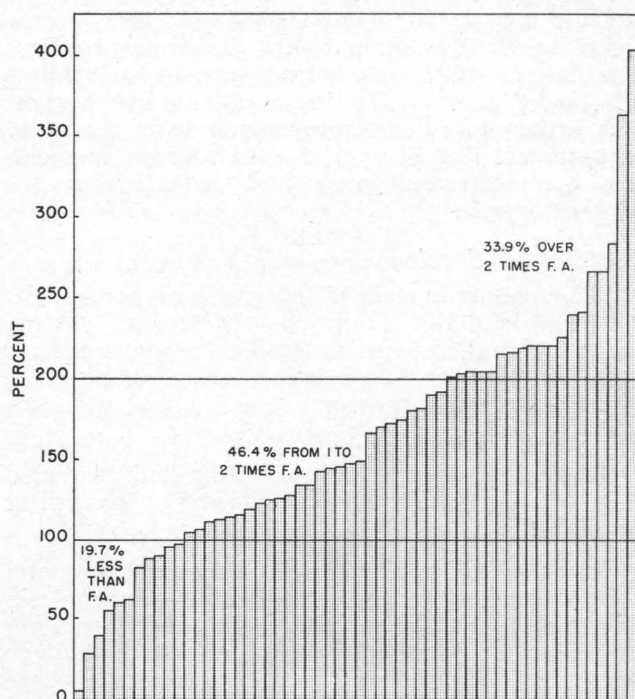


Figure 2. Members' equities as a percentage of fixed assets.

TABLE 7. DISPOSITION OF COTTON BY PATRONS THROUGH GIN'S MARKETING SERVICE, 1958 SEASON

Item	Gins reporting by volume		Proportion of bales marketed
	Number	Bales	Percent
Market information provided	60	522,306 ¹	
Market service separate from co-op	4	40,533 ¹	
Market service provided by gins	56	481,773 ¹	
Gins reporting marketing cotton ginned elsewhere	42	28,035	
Gins reporting ginning cotton marketed elsewhere ²	46	—48,688	
Total bales marketed through gin's marketing service	56	461,120	100.0
Processed into loan - total	52	213,054	46.2
Form A	31	(129,570)	(28.1)
TCG ³	4	(10,902)	(2.4)
PCCA ⁴	35	(72,582)	(15.7)
Sold through broker service	41	56,904	12.3
Purchased by gin	29 ⁵	25,401	5.5
Marketed through PCCA Pool	48	163,704	35.5
Ineligible bales marked to PCCA	35	2,057	.5

¹Bales ginned.

²Excluding the four gins with no marketing service of their own.

³Texas Cotton Growers.

⁴Plains Cotton Cooperative Association.

⁵Only 12 gins reported buying cotton in excess of remnants.

him additional outlets, (3) provides the gin with greater knowledge about the patrons' activities which can be used to better serve his interests, (4) facilitates collection of accounts receivable and (5) provides an additional check for possible errors on gin operations.

Disadvantages mentioned were that (1) it sometimes requires seasonal help, (2) increases the amount of work, especially bookkeeping and (3) did not pay for itself (based on direct income from fees). Respondents also listed as problems associated with the marketing services such things as (1) difficulty of finding a reliable bookkeeper, (2) errors in calculations which were a source of potential ill-will and (3) difficulties in meeting competitive pricing and establishing the market outlets.

Cottonseed Services

Respondents were asked whether they bought cottonseed; delinted cottonseed; treated cottonseed; or handled planting seed. In addition they were asked to provide information about their experiences with these services.

All the gins purchase their patron's cottonseed, and most of them said they had provided this service since the cooperative was first organized.

According to gin officials the purchase and sale of cottonseed is a profitable part of gin operations. Seven percent of the operators said this service contributed less than 20 percent to total net margins from all operations before patronage refunds, 56 percent said it contributed 20 to 60 percent and 10 percent said it contributed

more than 60 percent. Twenty-seven percent did not estimate the proportion which cottonseed purchase and sale contributed to net margins.

Only 7 of the 62 gins provided delinting and treating services. These services were added to gin operations after 1950 by those who gave the date.

Sixty of the 62 gins studied handled planting seed. Sixteen of these did not know or did not report the date when handling of planting seed was first provided as a function of the gin. For those reporting, two out of every three said it was provided when the gin was first organized and one out of every three said it was added after the gin had been in operation for some years.

More than two-thirds of the respondents said they did not try to influence the variety of planting seed used in the community and slightly more than one-third said they did try to influence variety. Usually this was done by discussion at meetings, by talking individually with producers, or by handling only certain varieties. Possibly a greater proportion of the operators than indicated do influence varieties grown by limiting their selection to certain varieties.

Thirteen of the 60 respondents handling planting seed reported less than 40 percent of their gin patrons used this service, 25 reported 40 to 80 percent used it and 15 said more than 80 percent of their patrons used the service. Seven gin operators did not report the number of patrons using the service.

The cooperative gins sell planting seed at little more than cost. Most of them said they about broke even on the service, a few said they made slightly more than cost and a few had slight losses from the service.

Comments on the advantages of cottonseed services indicate that most gin operators feel that the purchase of cottonseed from patrons and the sale to oil mills is profitable.

Advantages in handling planting seed most often mentioned were: (1) It influences the production of better varieties, (2) it affords an early (spring) contact with the farmer and keeps them "cooperative minded" through the year, (3) it is a convenience to patrons and maintains their goodwill and (4) it increases patronage and ginnings. Several said increased yields from better varieties was a factor in increased ginnings.

Disadvantages and problems mentioned in handling planting seed were: (1) it is difficult to anticipate adequately the supply needed, which leads to carryover if some farmers fail to buy and to an inadequate supply if hail or poor germination cause crop failures, (2) it is difficult at times to get the variety of seed wanted, (3) sometimes the gin gets bad seed and incurs customer ill will, (4) the gin has money tied up in planting seed and credit collection sometimes proves to be a nuisance, (5) it is difficult to retest holdover seed

and (6) the gin does not make anything on the service. One respondent said he lacked sufficient facilities to handle planting seed.

Cotton Hauling Service

Only one cooperative gin reported provision of cotton hauling service from the field to the gin. This gin owned trailers and loaned them to farmers for hauling their cotton. No charge was made for the service. Less than 50 percent of their member-patrons used the service, which was first offered in 1958.

All the gins provide hauling service to the compress, some by contract with local truckers, and others with cooperative-owned trucks. All their member-patrons used this service. Charges reported ranged from 50 cents to \$1 per bale. Variation in insurance coverage (included in the charge), as well as distance, probably contribute to the difference in charges between gins.

Most of those that contract with local truckers to haul cotton to the compress charge their member-patrons only what they pay the trucker. The others apparently scale their charge to just about cover cost, as most of them about break even or make a little on the service. Only three reported loss on the service in 1958.

Providing transportation to the compress is apparently a competitive necessity in present gin operations. All the gins studied provided it. Only about half of them, however, said they provided the service when the gin was first organized as a cooperative. Sixteen either did not know or did not report when the service was first provided. Fourteen said they first provided hauling service after the gin operated as a cooperative for several years.

The most important advantages of providing transportation to the compress mentioned by gin operators were: (1) keeps cotton off the yard, lessens fire hazard and lowers insurance rate, (2) provides faster service and enables farmers to get bonded warehouse receipts earlier, (3) provides a convenience to farmers and to the gin (in sampling and keeping records) and (4) provides jurisdiction over movement of cotton. Several gin operators mentioned that the gin also realized some net margins on the operations and gets dividends from the regional cooperative compress.

Disadvantages and problems in providing the service most often mentioned by those who provided their own facilities (did not contract with truckers) were: (1) it required additional labor, sometimes difficult to obtain, and additional investment in facilities and (2) it was sometimes a problem to keep the trucks running.

Distribution of Burs to Patrons

Thirty-four of the 62 gins studied distributed burs to their patrons. Most of the others made the burs available to those farmers who wanted them. Of the 34 who provided for distribution,

14 did so by contract with truckers and the charge to farmers covered the trucker's fees.

The usual charge for hauling the burs was \$2.50 per ton. All but two reported charges within the range of \$2 to \$2.50 per ton. About half the gins that provided for distribution of burs reported less than 25 percent of their member-patrons used the service, and two out of every five gins said 25 to 50 percent used the service. Only one in 10 gins which offered the service had more than 50 percent of its patrons using it.

Distribution of burs as a service is of recent origin. Only 3 gins provided the service when they first organized, and all of these were organized after 1950. Four did not report when the service was first provided. The other 27 started providing the service after 1950 and after the gin had been operating for some time.

Gins that contracted with truckers to provide the service made nothing on the service, merely charging the farmers the amount paid the truckers. Most of the others reported they either broke even or made a small margin on the service.

Advantages of providing the service mentioned by operators were: (1) it keeps premises clean of burs, lessens fire hazards and provides a basis for lower insurance rates, (2) it is the cheapest and cleanest means of disposal of burs and (3) it is a service to the farmer patrons which improves the productivity of their land, and thus, may increase ginning business.

Among the disadvantages and problems of providing the service were mentioned (1) investment in facilities and need for additional labor, (2) occasional difficulty in getting labor of the right kind and at the right time, (3) breakdowns and the problem of keeping the trucks running and (4) satisfying patrons, since everyone wants to be first, and there are not enough burs to go around. Some of those who contract the service indicated they sometimes get a contractor who does not spread burs evenly, gets them on the wrong field, or spreads too little per acre and customers complain about this to the gin manager.

Supply of Labor to Patrons

Twenty-seven of the 62 gin operators said they provided service in supplying labor to member-patrons, but 8 of these merely acted as an intermediary, or placement service, between domestic workers and their farmer-patrons. Probably more of the cooperative gins provide such placement services on intermittent occasions than is indicated from this response.

Twelve of the cooperative gins helped supply both bracero and domestic labor, and half of these provided some form of central housing. In addition, four other gins helped supply bracero labor, but did not handle domestic labor and three of these provided central housing in their programs. Three gins helped supply domestic, but not bracero, labor and had central housing facilities.

Thus, there were 19 gins providing a rather extensive labor supply service to their patrons and 12 of these provided central housing facilities.

Most of the cooperatives reported financial losses on the labor supply service and most of the more extensive labor programs were initiated by the cooperatives in recent years.

Those that had a labor supply service mentioned as advantages: earlier ginning, loyal patrons and increased patronage and aids in getting cotton pulled when it is ready. Maintaining the goodwill of their patron-members by providing them with a convenient labor supply appeared to be the dominant factor influencing gins to provide labor service.

Disadvantages and problems in providing the labor service appeared to be more acute than for other services. The difficulty of "keeping everybody happy" and "financial loss" in providing the service were frequently mentioned as problems. Supervision of laborers, deciding who gets the laborers and when, and "red tape" in handling the bracero program is an example of the "headaches" associated with the program.

Entomology Service

Thirty-five of the gins reported they provided entomology service of one type or another to their member-patrons. Thirty of these provided field checking periodically for insect population. In some cases the manager checked; in others an entomologist, either hired by the gin or furnished by insecticide companies, did the checking. Most of the gins have started this service since 1950, and in all but one case, it is provided free of charge to producers.

Twenty-five of the gins handled insecticides, although some of these kept no stock but merely ordered for the producer when needed. Nineteen of the gins arranged for airplane dusting service for their member-patrons. No charge was made for contacting and arranging for airplane dusting.

Advantages of the entomology service are primarily a result of the convenience to the member-patrons, the goodwill it incurs for the cooperative, added ginnings that came from that goodwill and higher yields due to lower insect damage. Apparently there is little disadvantage or any problem associated with the entomology services other than the inconvenience and extra work involved.

Credit Service

Fifty-nine of the 62 gins furnished short-term credit in some form, and most of them made no charge for it. Credit was usually advanced for harvesting expenses and for planting seed and other supplies. Credit advanced for harvesting usually was collected when the cotton was sold. Some of the gins gave discounts on supplies if the account was paid by the end of the month or within 30 days. Others charged the regular

price, but charged interest if not paid within a specified period of time.

About half of the 40 gins that gave dates when they first provided credit service started the service when the gin was first organized. The others started it later, but there was no single period when most of the gins initiated this service.

Only one of the gins gave long-term credit, and this was for buildings in which to house labor. Another gin said it was starting a long-term credit policy for the same purpose.

About half of the gins reported that 75 to 100 percent of their member-patrons used the credit service, and one-third said less than half of their patrons used it.

Advantages of the service lies in the goodwill it creates as a convenience and service to the farmer, and the increased patronage that results. A disadvantage is in the extent to which collection is a problem, and bad debts are likely to result. Also, it requires additional bookkeeping and more capital for gin operations.

Supplies and Other Services

Eight of the cooperatives handled fuel and lubricants. Two of these provided both bulk and retail service, three only bulk service and three only retail service.

Nine of the gins handled fertilizers. Only two handled anhydrous ammonia.

Thirty of the gins handled other supplies, such as feed, antifreeze, seeds, fertilizer supplies and other farm supplies. Eight provided various other services such as providing stalk cutters, poison machines, cotton picking machines, welding shop work, storage and drying grain and furnishing help when farmer-patrons were in a "tight-spot."

The advantages of these services mentioned by operators were: convenience to farmers, creation of goodwill toward the cooperative and maintenance of contact with the farmer throughout the year.

Supplementary Analysis

Respondents indicated that they provided many of the services to create goodwill and increase patronage. The implication was that increased ginnings resulted and that the service contributed to the gins' welfare in this manner.

To determine whether this may be the case, net margins of the gins were related to their total bales ginned. When these data were plotted on a graph, a rather strong relationship was observed—the greater the number of bales ginned, the higher the net margins. A least-squares correlation equation was computed and the corrected correlation coefficient was .88, indicating that net margins were determined dominantly by number of bales ginned. Many operators pointed

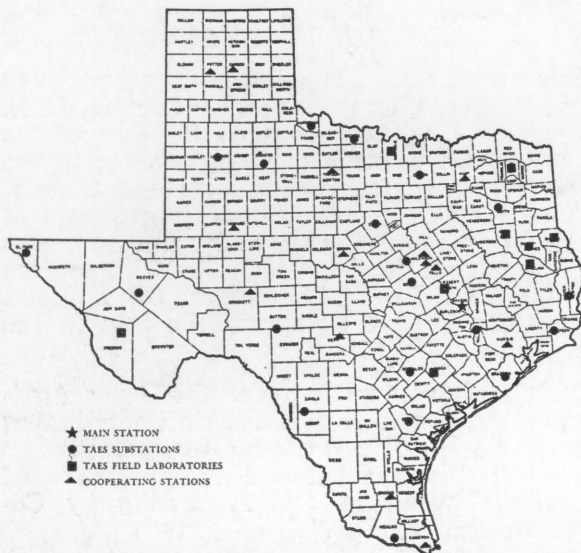
out that cottonseed purchase and sale contributed significantly to their net margins. Purchase and sale of cottonseed, of course, is directly related to ginnings.

An analysis was made to determine if there was a relationship between size of gins and services provided by relating total assets to services. Apparently, size is not a major factor in providing services. A somewhat higher proportion of the larger gins provided labor service than the smaller ones. Also, for those reporting sufficient data for the analysis, all the gins with total assets exceeding \$500,000 provided service for marketing cotton through PCCA; whereas, only slightly more than 80 percent of those with less than \$500,000 total assets did so. Outside of these two cases, there was no discernible relation of particular services with the size of gin as measured by total assets.

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Location of field research units of the Texas Agricultural Experiment Station and cooperating agencies

State-wide Research



The Texas Agricultural Experiment Station is the public agricultural research agency of the State of Texas, and is one of the parts of the A&M College of Texas.

ORGANIZATION

IN THE MAIN STATION, with headquarters at College Station, are 16 subject-matter departments, 2 service departments, 3 regulatory services and the administrative staff. Located out in the major agricultural areas of Texas are 21 substations and 9 field laboratories. In addition, there are 14 cooperating stations owned by other agencies. Cooperating agencies include the Texas Forest Service, Game and Fish Commission of Texas, Texas Prison System, U. S. Department of Agriculture, University of Texas, Texas Technological College, Texas College of Arts and Industries and the King Ranch. Some experiments are conducted on farms and ranches and in rural homes.

OPERATION

THE TEXAS STATION is conducting about 400 active research projects, grouped in 25 programs, which include all phases of agriculture in Texas. Among these are:

Conservation and improvement of soil	Beef cattle
Conservation and use of water	Dairy cattle
Grasses and legumes	Sheep and goats
Grain crops	Swine
Cotton and other fiber crops	Chickens and turkeys
Vegetable crops	Animal diseases and parasites
Citrus and other subtropical fruits	Fish and game
Fruits and nuts	Farm and ranch engineering
Oil seed crops	Farm and ranch business
Ornamental plants	Marketing agricultural products
Brush and weeds	Rural home economics
Insects	Rural agricultural economics
	Plant diseases

Two additional programs are maintenance and upkeep, and central services.

Research results are carried to Texas farmers, ranchmen and homemakers by county agents and specialists of the Texas Agricultural Extension Service

AGRICULTURAL RESEARCH seeks the WHATS, the WHYS, the WHENS, the WHEREs and the HOWs of hundreds of problems which confront operators of farms and ranches, and the many industries depending on or serving agriculture. Workers of the Main Station and the field units of the Texas Agricultural Experiment Station seek diligently to find solutions to these problems.

Today's Research Is Tomorrow's Progress